

REMARKS

By this Amendment the specification has been amended to include topic headings and to correct "palladium" to "copper" in Example 2 on page 10 (note that this example is directed to a catalytic paint with copper for the metallisation of polymer substrate), claim 1 has been amended to more specifically define the polymeric formulation, claim 10 has been canceled, and new claim 25 has been added. Entry is requested.

In the outstanding Office Action the examiner has (1) rejected claims 1-13 and 15-21 under 35 U.S.C. 102(b) as being anticipated by Dupuis et al., (2) rejected claim 14 under 35 U.S.C. 103(a) as being unpatentable over Dupuis et al. in view of Akai et al., (3) rejected claims 22 and 23 under 35 U.S.C. 103(a) as being unpatentable over Dupuis et al., and (4) rejected claim 24 under 35 U.S.C. 103(a) as being unpatentable over Dupuis et al. in view of Tsubaki et al.

These rejections must be withdrawn.

Dupuis et al. disclose a polymeric resin of adjustable viscosity and pH for depositing palladium on a substrate, the resin including a palladium salt, a complexing agent of the carboxylic acid or chloride type, a water soluble polymer containing hydroxyl and/or carboxyl groups, an alkaline compound and a solvent selected from water, methanol and ethanol.

In the photosensitive dispersion of the present invention a pigment which confers properties of oxidation-reduction under light irradiation (titanium dioxide) is combined with a metallic salt, a sequestering agent for the metallic salt, a basic compound, an organic solvent, water, and a liquid film-forming polymeric formulation of a water insoluble agent (alkyl, insoluble acrylic, polyester, epoxy and/or acrylic emulsion). High affinity of titanium dioxide to water, methanol and ethanol occurs, essentially due to the high polarity of these hydroxylic solvents. If a water soluble polymer is used, titanium dioxide will have a highest affinity to the polymeric binder that covers titanium dioxide particles instead of the metallic salt/complexing agent system. This implies that with a water soluble polymer the main oxidizing-reduction reaction occurs with the polymer and not with the metallic salt. As a consequence, metal deposition does not take place.

Moreover, a water soluble polymer remains soluble in water even after a film formation obtained after solvent evaporation. As electroless and electrolytic baths are water based, titanium dioxide gets dispersed into that kind of bath if a water soluble polymeric system is used.

Although Dupuis et al. refer to use of acrylic polymers, only water soluble acrylics are used. On the other hand, in the present invention, only water insoluble ones are used.

In the current dispersion, only a small quantity of water is used to introduce the metallic salt/complexing agent system into the dispersion,

in order to have a great affinity between that system and the titanium dioxide pigment. Organic solvents are used to introduce the polymeric binder with a lowest affinity to the titanium dioxide pigment. Therefore, in these systems the main oxidizing-reducing reaction takes place between the titanium dioxide pigment and the metallic salt leading to an efficient metal deposition.

Furthermore, in the present invention, a mixture of organic solvents, with low and high evaporation temperatures is used. This allows a high titanium dioxide concentration on the film surface, together with a good film formation. As a result, the UV reaction can easily take place.

If methanol and/or ethanol are used to introduce the polymeric binder into the actual composition of the dispersion, a competition will occur between the metallic salt/complexing agent system and the polymer for the reaction on the titanium dioxide pigment. Insufficient metal deposition will result.

Nothing in Akai et al. or Tsubaki et al. will overcome the deficiencies in Dupuis et al. in suggesting the claimed invention.

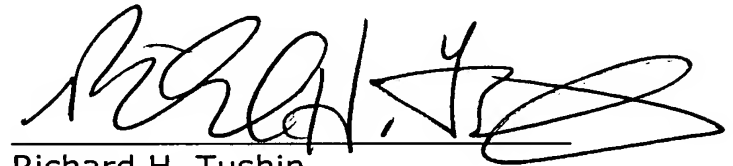
The examiner's rejections should be withdrawn.

The additional government claim fee should be charged to Account
No. 04-2223.

Respectfully submitted,

DYKEMA GOSSETT PLLC

By:



Richard H. Tushin
Registration No. 27,297
Franklin Square, Third Floor West
1300 I Street, N.W.
Washington, DC 20005-3353
(202) 906-8680